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PLANNED CHANGE AND ORGANIZATIONAL HEALTH--FIGURE AND GROUND. CHAPTER 2, CHANGE PROCESSES IN THE PUBLIC SCHOOLS.

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PLANNED CHANGE, CONDITIONED BY THE STATE OF THE SYSTEM IN WHICH IT OCCURS, MUST TAKE THE IMPROVEMENT OF ORGANIZATIONAL HEALTH AS A PRIMARY TARGET. THE HEALTHY SCHOOL SYSTEM IS ABLE TO FUNCTION EFFECTIVELY AND TO DEVELOP INTO A MORE FULLY FUNCTIONING SYSTEM. OF TEN ORGANIZATIONAL HEALTH DIMENSIONS APPLICABLE TO SCHOOLS, THREE ARE TASK CENTERED (GOAL FOCUS, COMMUNICATION ADEQUACY, AND OPTIMAL POWER EQUALIZATION), THREE DEAL WITH THE INTERNAL STATE OF THE SYSTEM AND ITS INHABITANTS' MAINTENANCE NEEDS (RESOURCE UTILIZATION, COHESIVENESS, AND MORALE), AND FOUR DEAL WITH GROWTH AND CHANGEFULNESS (INNOVATIVENESS, AUTONOMY, ADAPTATION, AND PROBLEM-SOLVING ADEQUACY). PROPERTIES OF EDUCATIONAL SYSTEMS THAT CONDITION THE APPLICATION OF ORGANIZATIONAL THEORY INCLUDE GOAL AMBIGUITY, INPUT VARIABILITY, ROLE PERFORMANCE INVISIBILITY, LOW INTERDEPENDENCE OF PARTS, VULNERABILITY, LAY-PROFESSIONAL CONTROL PROBLEMS, AND LOW TECHNOLOGICAL INVESTMENT. SIX APPROACHES, APPLYING ORGANIZATIONAL THEORY TO EDUCATIONAL SYSTEMS, ARE PRESCRIBED TO INDUCE ORGANIZATIONAL HEALTH--(1) TEAM TRAINING, (2) SURVEY FEEDBACK, (3) ROLE WORKSHOP, (4) TARGET SETTING AND SUPPORTING ACTIVITIES, (5) ORGANIZATIONAL DIAGNOSIS AND PROBLEM-SOLVING, AND (6) ORGANIZATIONAL EXPERIMENT. BASIC TO THE SUCCESS OF THESE INTERVENTIONS ARE THE FACTORS OF ORGANIZATIONAL SELF-STUDY, RELATIONAL EMPHASIS, INCREASED DATA FLOW, NORMS AS CHANGE TARGETS, A TEMPORARY-SYSTEM APPROACH, AND EXPERT OR CONSULTANT FACILITATION. THE COMPLETE DOCUMENT, "CHANGE PROCESSES IN THE PUBLIC SCHOOLS," IS AVAILABLE FROM THE CENTER FOR THE ADVANCED STUDY OF EDUCATIONAL ADMINISTRATION, UNIVERSITY OF OREGON, EUGENE, OREGON 97403, FOR $2.00. (JK)

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Change Processes in the Public Schools

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Change Processes in the Public Schools

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Foreword

Organizations have careers in much the same sense that individuals have careers. In the tracing out of organizational careers, a number of changes can always be detected, even among the seemingly most stable organizations.

Change in organizations comes about in many ways. Some changes occur with the size of the organization and some changes occur with the maturation process. Also, organizational change results, sometimes dramatically but most often not, from the succession of people through key offices. Similarly, a kind of evolutionary change in organizations can be seen as they adapt to forces within or conditions of their environments. To some extent, changes of this order can be called "organizational drift" because they frequently go unnoticed by those who direct the affairs of an organization. The effect of these rather gradual changes are almost imperceptibly viewed over a short time span but sometimes loom large when the overall career of the organization is considered.

In addition to organizational change that might be characterized as drift, change comes about in organizations by design or deliberate plan. Being seemingly "self" conscious about ends to be achieved and means of achieving ends, organizations strive for survival, if not perfection, and seem constantly to be proposing and carrying out change plans. It is this latter type of change, *planned change*, which is treated in this publication.

This publication is a report of a seminar conducted with public school officials by the Center for the Advanced Study of Educational Administration at the University of Oregon. The seminar, considered a pilot venture, had as its main objective the enhancement of the school officials' understanding of the planned change processes and of their skills in carrying out planned change. In formulating the design of the seminar we were aided by members of the Committee on Inservice Education of the Oregon Association of Schoo! Administrators. Some changes in the order and nature of events were made while the seminar was in progress; these changes resulted from the almost continuous conversation with the consultants and other interested persons on the question, "How are things going?"

The seminar, held in Portland, Oregon in October, 1964, revolved

around two major elements: (1) small group discussions of papers prepared for the seminar by four consulting social scientists, and (2) what were termed "clinic sessions." These sessions brought the school officials and the social scientists together in small groups where attention was given to specific change problems that had been, and were being encountered by the school officials. In advance of the clinic sessions, the school officials prepared memoranda of their specific problems.

All of the events of the seminar are not reported here, nor does the order of the contents of this publication follow the order of the seminar itself.[1]

The publication includes three of the four papers prepared for the seminar by the consulting social scientists—those by Matthew B. Miles, Art Gallaher, Jr., and Everett M. Rogers. Unfortunately we were unable to secure publication rights to the paper by James Q. Wilson and consequently his work does not appear here. The papers by Richard O. Carlson and Roland J. Pellegrin, although they were read during the seminar, were not part of the grist for the mill in the clinic and discussion sessions. It will be noted that the papers of these latter two contributors present different perspectives on planned change from those contained in the papers by the consultants and in the summaries of the group discussions.

The final section of this publication is a summary of the seminar itself which was made by Donald E. Tope at its concluding session.

Some financial aid for the seminar was provided by the National Institute of Mental Health of the Department of Health, Education, and Welfare. Our indebtedness extends also to the University Council for Educational Administration for the aid which was provided through its Executive Director, Jack Culbertson. Although they are unnamed here, many persons contributed a variety of talents to the task of the seminar and their efforts are gratefully acknowledged.

RICHARD O. CARLSON
KEITH GOLDHAMMER
Seminar Coordinators

February, 1965
UNIVERSITY OF OREGON, Eugene, Oregon

[1] Although absent from this publication, a discussion of *The Jackson County Story* was included in the seminar. This case study exists in published form and may be obtained from the Center for the Advanced Study of Educational Administration, University of Oregon. (*The Jackson County Story, A Case Study*, by Keith Goldhammer and Frank Farner. University of Oregon, Center for the Advanced Study of Educational Administration, 1964.)

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2

Planned Change and Organizational Health:

Figure and Ground

By
MATTHEW B. MILES

EA 000 715

Planned Change and Organizational Health: Figure and Ground

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ANY OBSERVER of the applied behavioral sciences today would have to note a remarkable interest in the entire problem of planned change. Scientists and practitioners alike are concerned with the stages of planned change in groups, organizations, and communities; with the question of how change processes can be managed in a meaningful sense of that word; and with the characteristics of the "change agent," that miraculous middleman between What Science Has Proved and What We Are Up Against. The very existence of this seminar is a case in point.

There is a growing literature, in journals as diverse as *Applied Anthropology* and *Petroleum Refiner;* there have already been thoughtful attempts to collect this literature, and to conceptualize the problems involved. (Lippitt, Watson and Westley, 1958; Bennis, Benne and Chinn, 1961). All this is gratifying to beleaguered school administrators—and to everyone who, following Kurt Lewin's most frequently-quoted dictum, believes that "there is nothing so practical as a good theory."

Yet it seems to me that there is an important, but often-overlooked aspect of what is being said and done about planned change: the notion that any particular planned change effort is deeply conditioned by the state of the system in which it takes place. For example, properties of the organization such as communication adequacy, and the distribution of influence have a powerful effect on the speed and durability of adoption of any particular innovation, from *English 2600* to data processing of teacher marks. To use an image from Gestalt psychology, specific planned change attempts have most typically been "in figure," occupying the focus of attention, while the organization itself has remained the "ground."

I believe this emphasis is both practically and theoretically unfortunate. It is time for us to recognize that successful efforts at planned change must take as a primary target the improvement of *organiza-*

tion health—the school system's ability not only to function effectively, but to develop and grow into a more fully-functioning system.

Perhaps I can illustrate my assertion that organization properties have often been treated peripherally, or left to sit as background phenomena. If you have examined the literature on the diffusion of innovations, perhaps with the aid of Everett Rogers' excellent compendium (1962) you will notice that a good deal of attention is paid to the individual innovator, to when he adopts the innovation, and why. But the literature remains nearly silent on the organizational setting in which innovation takes place. I suspect this has several antecedents.

For one thing, the typical adopter in most rural sociological studies is an individual farmer rather than a collectivity such as an organization. The farmer's role in the community setting turns out to be important, but aside from studies on "traditional" versus "modern" community norms, the influence of the larger social setting tends to be underplayed.

Paul Mort did, on the other hand, make extensive studies of innovation by organizations—school districts (see Ross, 1958). But Mort, far from being even an amateur sociologist, appeared almost aggressively ignorant of available knowledge about the functioning of organizations and communities. His "common sense" categories and demographic indices give us no inkling of what was really going on in the districts who supplied him with data.

Even Dick Carlson's (1964) study of the adoption of modern math by school superintendents suffers a bit, I think, from a kind of "great man" tendency; the internal dynamics of the school system are seen as less important than characteristics of the local superintendent, such as his position in the reference group of administrators in the region. His data are compelling, but I suspect they would have been even more powerful had he gone into more depth on the dynamics of the local setting.

From the anthropological side, I think it fair to say that there has been an over-emphasis on the properties of a particular innovation itself, its diffusion across systems, and its integration within systems —without a corresponding degree of interest in the dynamics and functioning of the receiving organization as such. Art Gallaher (1963) has thoughtfully discussed power structure in innovation-receiving systems, the actual prestige of advocates of the innovation, and other matters influencing how (or if) an innovation will be integrated into the local organization. But even here, I think the analysis is overfocused on the "thinginess" of the particular innovation, taking the local system itself as a kind of unmodifiable ground against which the innovation shows up in stark figure.

One more example. The currently wide-spread emphasis on the

importance of "dissemination of research findings," and even the recent effort of the U. S. Office to provide development and demonstration centers, likewise avoid the problem. They share the popular view that the *content* or demonstrated efficacy of a particular educational innovation, as such, is the crucial thing in determining whether or not it will be adopted and used effectively. As you can gather, I am taking a decidedly processual view here: organization dynamics are the focus of attention.

I hope I have not misrepresented the views of my colleagues. It would please me to be corrected, in fact. What I do want to counter in this paper is a set of assumptions (by scientists or practitioners) that organization properties—from decision-making methods to interpersonal climate—are simply "there," that they are relatively invariant, and cannot (or should not) themselves be made the subject of planned change efforts.

More generally, the position being taken is this. It seems likely that the state of health of an educational organization can tell us more than anything else about the probable success of any particular change effort. Economy of effort would suggest that we should look at the state of an organization's health as such, and try to improve it—in preference to struggling with a series of more or less inspired short-run change efforts as ends in themselves.

To analogize with persons for a minute: the neurotic who struggles through one unavailing search for "something new" after another will never be genuinely productive until he faces and works through fundamental problems of his own functioning. Genuine productiveness—in organizations as in persons—rests on a clear sense of identity, on adequate connection with reality, on a lively problem-solving stance, and on many other things, to which I would like to turn in a moment. Here I only wish to leave you with the root notion that attention to organization health ought to be priority one for any administrator seriously concerned with innovativeness in today's educational environment.

In the remainder of this paper, I should like, first, to deal with some problems in the very concept of health, both generally and as applied to organizations. The next section reviews the conception of "organization" employed in the rest of the paper, and outlines some dimensions of organization health as I see them. All this is rather general, and I should then like to turn to some discussion of the special properties of *educational* organizations, as such, and what their particular ways of departing from optimum organization health seem to be. Lastly, as an applied behavioral scientist, I would be remiss if I did not discuss some representative technologies for inducing organization health, and suggest some principles underlying them.

Most of this paper is frankly speculative, though it is informed by a good deal of current work in the applied behavioral sciences—and

even, now and then, by some contact with phenomena such as superintendents, principals, teachers and children. All of the notions in the paper need vigorous discussion and testing.

Some Problems in the Concept of "Health"

The historical, common-sense notion of health is that it represents absence of illness, disease, suffering, wrongness in an organism. If not arrested, a serious "sickness" may lead to irreversible changes, such as organ impairment, atrophy or death. But beginning (to my knowledge) with the interesting British work in preventive medicine dubbed the "Peckham Experiment," there has been more and more medical concern with the notion of positive well-being or optimal functioning. That is, disease-freeness, in and of itself, does not guarantee that an organism will in fact be coping with life's adventures with a sense of *élan*, and growing while it does so.

This conception of positive health—in many ways a sneaky, vague notion—has also been receiving more and more attention in the mental health literature (see Jahoda, 1958). And there is increasing interest in the fields of psychotherapy and human relations training with the notion of "self-actualization." Both "positive health" and "self-actualization" imply a considerable gap between sheer disease-freeness, and something that might be called the fully functioning human being. This is an attractive idea; it is consistent with much of our common sense experience, and it caters to the American notion of the (nearly) infinitely-improvable man.

But even if something like "positive health" or "self-actualization" can be said to exist—and Maslow's (1950) case studies are instructive and plausible in this respect—there are some traps and difficulties in applying such concepts to organization functioning. One, of course, is the tendency to go "over-organismic," reifying the organization into some kind of gigantic person, or least organism. This, of course, leads into the hoary disputation about whether systems larger than that of the individual person are "real" (see, for example, Warriner, 1956), a totally unprofitable byway which I do not propose to enter at the moment.

Another danger is that the notion of health implies "sickness"; school administrators are having enough difficulty as it is without being accused of being at the helm of pathological vessels on the stormy seas of innovation. The very image of "sickness" itself diverts attention away from the notion of positive growth and development, implying that only correction of some negative or painful state is required.

Finally, there are the risks involved in any discussion involving "ideal types"—distortion of reality, or blindness to large portions of it, and a prevalence of normative, preachment-type statement-

making about any particular organization (or, more usually, *all* organizations).

All these objections have some validity; I do not propose to eradicate them here, only to bring them to awareness, so they do not hamper the subsequent discussion unduly. In brief, the intellectual risks of an "organization health" approach seem to me far outweighed by the advantages. A reasonably clear conception of organization health would seem to be an important prerequisite to a wide range of activities involving organizations: research of any meaningful sort; attempts to improve the organization as a place to live, work, and learn; and—not least—the day-to-day operations of any particular organization, such as your own school system.[1]

Organizations: Their Nature

Formal definitions show that the author of the paper has paid his debt to "the literature"; they may sometimes even help in de-limiting the sphere of discussion. "Organization" is here treated as a special case of the more general concept "system," more particularly "open system." The latter is defined as:

> A bounded collection of interdependent parts, devoted to the accomplishment of some goal or goals, with the parts maintained in a steady state in relation to each other and the environment by means of (1) standard modes of operation, and (2) feedback from the environment about the consequences of system actions. (Miles, 1964 a, p. 13)

Argyris (1964, p. 120) poses a broadly similar definition: "(1) a plurality of parts, [which] (2) maintaining themselves through their interrelatedness and, (3) achieving specific objective(s), (4) while accomplishing (2) and (3) adapt to the external environment thereby (5) maintaining their interrelated state of parts."

Either of these definitions would apply to a system such as a candle flame, an air-conditioning unit, or a school district. For our purposes, it is perhaps sufficient to say that the above definitions, in the special case of the "organization," are expected to apply to social systems larger than a face-to-face group, and with a reasonable degree of goal specification (this latter to exclude larger systems, such as communities and nations).

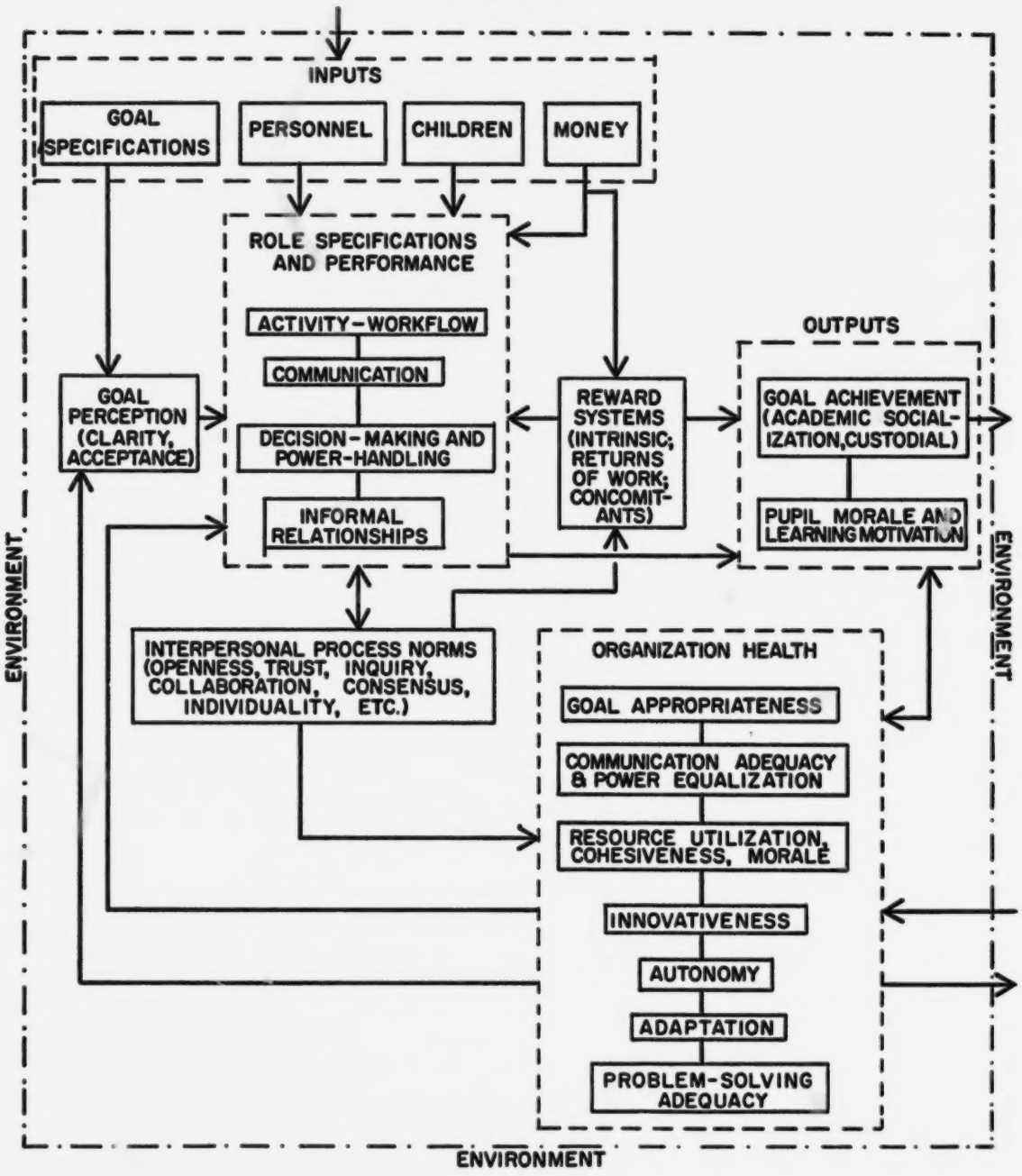
Somewhat more specifically, reference to Figure 1 will indicate the notion "educational organization" used as a backdrop for this paper. Notice that the usual hierarchical arrangement is absent, since the "parts" are not seen as persons or work groups, but as social-psychological components of the system which cross-cut persons and groups.

[1] For additional comments on the importance of the concept of organization health, see Bennis (1962).

The figure indicates that the organization exists in an environment from which it receives inputs (money, personnel, and children) and to which it releases outputs in terms of goal achievement, and morale and learning motivation of the clients in the organization (children).

Figure 1

SCHEMATIC MODEL OF ORGANIZATION FUNCTIONING AND CHANGE ENVIRONMENT



Between the input and the output, to paraphrase T. S. Eliot, falls the shadow of a number of other components. The inhabitants of an educational organization must have reasonably clear perceptions of the goal or goals to which the system is devoted; these in turn affect role specifications and performance for the inhabitants. Systems of reward and penalty regulate role performance, as do the norms governing the style of interpersonal transactions in the system. The arrows in the diagram are intended to indicate directions of influence between parts of the system, as well as to suggest that a variety of feedback loops exist which serve to maintain the system in a reasonably steady state.

If all goes well, desired system outputs are achieved. But this is not all: above and beyond the network of parts and their functioning, we can conceive of a set of system "health" characteristics, which have to do with the continued adequacy and viability of the organization's coping. More of this below. Here it is perhaps sufficient to sketch out the schematic model, and point out that it assumes nothing about the specific kinds of structures—planful or emergent—appearing in any particular system. The model will presumably fit a classical pyramidal scheme, as well as a number of more or less radical variants from this (e.g., those suggested by Argyris, 1964).

Organization Health

Our present thinking about organization health is that it can be seen as a set of fairly durable *second-order* system properties, which tend to transcend short-run effectiveness. A healthy organization in this sense not only survives in its environment, but continues to cope adequately over the long haul, and continuously develops and extends its surviving and coping abilities. Short-run operations on any particular day may be effective or ineffective, but continued survival, adequate coping, and growth are taking place.

A *steadily* ineffective organization would presumably not be heatlhy; on balance, "health" implies a summation of effective short-run coping. But notice that an organization *may* cope effectively in the short run (as for example by a speed-up or a harsh cost-cutting drive), but at the cost of longer-run variables, such as those noted below. The classic example, of course, is an efficiency drive which cuts short-run costs and results in long-run labor dissatisfaction and high turnover.

To illustrate in more detail what is meant by "second-order property," here is a list of ten dimensions of organization health that seem plausible to me. Many of them are drawn by heuristic analogy from the behavior of persons or small groups; this does *not* mean, of course, that organizations necessarily are precisely homologous to persons or groups—only that thinking in this way may get us somewhere on

what, it must be admitted, is a very complex problem indeed. Here then are ten dimensions. They are not, of course mutually exclusive, and interact with each other vigorously within any particular organization. Both Jahoda (1958) and Argyris (1964) have commented on the importance of a multiple-criterion approach to the assessment of health, given the present state of our knowledge and the fact, that as a college roommate of mine once remarked with blinding insight, "You know, everything is really connected to everything else."

The first three dimensions are relatively "tasky," in that they deal with organizational goals, the transmission of messages, and the way in which decisions are made.

1. *Goal focus.* In a healthy organization, the goal (or more usually goals) of the system would be reasonably clear to the system members, and reasonably well accepted by them.[2] This clarity and acceptance, however, should be seen as a necessary but insufficient condition for organization health. The goals must also be *achievable* with existing or available resources, and be *appropriate*—more or less congruent with the demands of the environment. The last feature may be most critical. Switching back to the person level for a moment, consider the obsessive patient who sets the clear, accepted, achievable goal for himself of washing his hands 250 times a day. The question remains: is this an appropriate goal in light of what else there is to do in life?

2. *Communication adequacy.* Since organizations are not simultaneous face-to-face systems like small groups, the movement of information within them becomes crucial. This dimension of organization health implies that there is relatively distortion-free communication "vertically," "horizontally," and across the boundary of the system to and from the surrounding environment. That is, information travels reasonably well—just as the healthy person "knows himself" with a minimum level of repression, distortion, etc. In the healthy organization, there is good and prompt sensing of internal strains; there are enough data about problems of the system to insure that a good diagnosis of system difficulties can be made. People have the information they need, and have gotten it without exerting undue efforts, such as those involved in moseying up to the superintendent's secretary, reading the local newspaper, or calling excessive numbers of special meetings.

[2] Note that the question of actual goal achievement as such is here conceived of as separate, analytically speaking, from the question of organization health. Argyris has suggested that organization effectiveness, a concept resembling the health notion, resides in the organization's ability to (1) achieve goals, (2) maintain itself internally, (3) engage in adaptation processes with the environment—and to accomplish these three "core activities" at a constant or increasing level of effectiveness, given the same or decreasing increments in energy input (Argyris, 1964, p. 123). This three-way scheme is also used in the present discussion.

3. *Optimal power equalization.* In a healthy organization the distribution of influence is relatively equitable. Subordinates (if there is a formal authority chart) can influence upward, and even more important—as Likert (1961) has demonstrated—they perceive that their boss can do likewise with *his* boss. In such an organization, inter-group struggles for power would not be bitter, though inter-group conflict, (as in every human system known to man) would undoubtedly be present. The basic stance of persons in such an organization, as they look up, sideways and down, is that of collaboration rather than explicit or implicit coercion. The units of the organization (persons in roles, work groups, etc.) would stand in an interdependent relationship to each other, with rather less emphasis on the ability of a "master" part to control the entire operation. The exertion of influence in a healthy organization would presumably rest on the competence of the influencer *vis-à-vis* the issue at hand, his stake in the outcome, and the amount of knowledge or data he has—rather than on his organizational position, personal charisma, or other factors with little direct relevance to the problem at hand.

These then are three "task-centered" dimensions of organization health. A second group of three dimensions deals essentially with the internal state of the system, and its inhabitants' "maintenance" needs. These are resource utilization, cohesiveness, and morale.

4. *Resource utilization.* We say of a healthy person, such as a second-grader, that he is "working up to his potential." To put this another way, the classroom system is evoking a contribution from him at an appropriate and goal-directed level of tension. At the organization level, "health" would imply that the system's inputs, particularly the personnel, are used effectively. The overall coordination is such that people are neither overloaded nor idling. There is a minimal sense of strain, generally speaking (in the sense that trying to do something with a weak or inappropriate structure puts strain on that structure). In the healthy organization, people may be working very hard indeed, but they feel that they are not working against themselves, or against the organization. The fit between people's own dispositions and the role demands of the system is good. Beyond this, people feel reasonably "self-actualized"; they not only "feel good" in their jobs, but they have a genuine sense of learning, growing, and developing as persons in the process of making their organizational contribution.

5. *Cohesiveness.* We think of a healthy person as one who has a clear sense of identity; he knows who he is, underneath all the specific goals he sets for himself. Beyond this, he *likes himself*; his stance toward life does not require self-derogation, even when there are aspects of his behavior which are unlovely or ineffective. By analogy

at the organization level, system health would imply that the organization knows "who it is." Its members feel attracted to membership in the organization. They want to stay with it, be influenced by it, and exert their own influence in the collaborative style suggested above.

6. *Morale.* The history of this concept in the social-psychological literature is so appalling that I hesitate to introduce it at all. The implied notion is one of well-being or satisfaction. Satisfaction is not enough for health, of course; a person may report feelings of well-being and satisfaction in his life, while successfully denying deep-lying hostilities, anxieties, and conflicts. Yet it still seems useful to evoke, at the organization level, the idea of morale: a summated set of individual sentiments, centering around feelings of well-being, satisfaction, and pleasure, as opposed to feelings of discomfort, unwished-for strain and dissastisfaction. In an *un*healthy system, life might be perceived rosily as "good," or as unabashedly bad; in a healthy organization it is hard to entertain the idea that the dominant personal response of organization members would be anything else than one of well-being.

Finally, there are four more dimensions of organization health, which deal with growth and changefulness: the notions of innovativeness, autonomy, adaptation *vis-à-vis* the environment, and problem-solving adequacy.

7. *Innovativeness.* A healthy system would tend to invent new procedures, move toward new goals, produce new kinds of products, diversify itself, and become more rather than less differentiated over time. In a sense, such a system could be said to grow, develop, and change, rather than remaining routinized, and standard. The analogue here is to the self-renewing properties of a Picasso; or to Schachtel's (1959) "activity" orientation (curious, exploring) as contrasted with "embeddedness" orientation (tension-reducing, protective) in persons.[3]

8. *Autonomy.* The healthy person acts "from his own center outward." Seen in a training or therapy group, for example, such a person appears nearly free of the need to submit dependently to authority figures, *and* from the need to rebel and destroy symbolic fathers of any kind. A healthy organization, similarly, would not respond passively to demands from the outside, feeling itself the tool of the environment, and it would not respond destructively or rebelliously

[3] Clark (1962) has suggested that organization health resides primarily in the continuous possibility of *both* kinds of orientation: toward change and development, and for stability and maintenance. This dual possibility should be realized, he suggests, at the personal, group, inter-group, and total organizational levels.

to perceived demands either. It would tend to have a kind of independence from the environment, in the same sense that the healthy person, while he has transactions with others, does not treat their responses as *determinative* of his own behavior.

9. *Adaptation.* The notions of autonomy and innovativeness are both connected with the idea that a healthy person, group, or organization is in realistic, effective contact with the surroundings. When environmental demands and organization resources do not match, a problem-solving, re-structuring approach evolves in which *both* the environment and the organization become different in some respect. More adequate, continued coping of the organization, as a result of changes in the local system, the relevant portions of the environment, or more usually both, occurs. And such a system has sufficient stability and stress tolerance to manage the difficulties which occur during the adaptation process. Perhaps inherent in this notion is that the system's ability to bring about corrective change in itself is faster than the change cycle in the surrounding environment. Explanations for the disappearance of dinosaurs vary, but it is quite clear that in some way this criterion was not met.

10. *Problem-solving adequacy.* Finally, any healthy organism—even one as theoretically impervious to fallibility as a computer—*always* has problems, strains, difficulties, and instances of ineffective coping. The issue is not the presence or absence of problems, therefore, but the *manner* in which the person, group, or organization copes with problems. Argyris (1964) has suggested that in an effective system, problems are solved with minimal energy; they stay solved; and the problem-solving mechanisms used are not weakened, but maintained or strengthened. An adequate organization, then, has well-developed structures and procedures for sensing the existence of problems, for inventing possible solutions, for deciding on the solutions, for implementing them, and for evaluating their effectiveness. Such an organization would conceive of its own operations (whether directed outward to goal achievement, inward to maintenance, or inward-outward to problems of adaptation) as being *controllable.* We would see active coping with problems, rather than passive withdrawing, compulsive responses, scapegoating, or denial.

Here then are ten dimensions of a healthy organization,[4] stated abstractly, even vaguely in many instances. They must, of course, be

[4] Little has been said here about the actual form of the organization which is most likely to meet these criteria of organizational health at some optimal level. Some applied work in organization change (Argyris, 1964; Bennis, 1962) suggests that strongly pyramidal organizations designed around strict division of labor, accountability, limited span of control, etc., are uniquely *ill*-fitted to the demands of survival in today's world. Argyris (1964) has suggested a number of alternatives to the pyramidal model, (such as the use of temporary "product teams" with

operationalized into meaningful indicators of organization functioning; the staff of our project is currently into this with more than a little trepidation, but with keen interest to see whether these ways of viewing the health of a system prove to have a reasonable amount of empirical steam behind them.

The Special Case of Educational Organizations

These dimensions can presumably be applied to any type of organization. Much of the theory and empirical data on which they are based was generated in industrial organizations in which "organization improvement" programs have become more and more widespread in the last few years. (See, for example, Bennis, 1963, 1964.) We need, however, to determine the special properties of *educational* systems (if any) which pre-dispose them to particular types of ill health. It is also necessary to examine whether the technologies of organization improvement which have proved successful industrially need adaption in certain directions before they are likely to be efficacious in schools. If this is not done, we might well expect a recrudescence of the unfortunate enthusiasm of schoolmen for Taylorism and "scientific management" which occurred in the first decades of this century. (See the excellent treatment of this appalling subject in Callahan & Button, 1964.)

In our own time, it has taken a good deal of agitation by people like Dan Griffiths to get school administrators and professors of education to accept the possibility that the school is in fact an organization, and as such shares certain properties with all other organizations, and that administrative theory, if well developed in any field of human endeavor, could apply to the school business. This is quite correct. However, emphasis on the commonality of all types of organizations has tended to obscure the fact that educational systems have special properties which condition the propositions of organization theory in reasonably predictable ways. What, then, are some of these properties?

1. *Goal ambiguity*. For many different reasons, it has seemed difficult to specify the output of educational organizations very precisely. Some of this is realistic: change in human beings is going on, with presumably cumulative effects over a long period of time. But part of this output measurement difficulty also seems to be a form of organiza-

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power base on functional contribution rather than position) which he feels are not only more likely to lead in the direction of organization health but respect the "essential properties" of organizations as open systems. Empirical data on this question are not numerous; however, work with communication nets in small simulated organizations has suggested that relatively loose, power-equalized, full-communication models of organization are much more effective than traditional models when the environment is shifting and changing. This finding also appeared in a study of Scottish electronic firms by Burns and Stalker (1961). See also Likert (1961).

tion defense or protection against criticism from the surrounding environment (see below).

Whatever the reasons, supposed "unmeasurability" of organizational output (hence, of the effectiveness of particular role occupants) seems a fairly durable feature of educational organizations as we know them today.

In addition, certain goals of the school (such as "academic learning") are often given primacy in public pronouncements while others (for example, the socialization of achievement motivation and appropriate *Gesellschaftlich* behavior for the incoming denizens of an industrial society) are treated as background phenomena. Still others (such as keeping the kids off the streets and out of Mother's way—call it custodial care) are usually taboo as legitimate goal statements.[5]

It is possible, of course, that school system goals are not all that unmeasurable and ambiguous. In some exploratory interviewing we have been doing in two suburban school systems, teachers and principals, almost without exception, denied that "it is difficult to know when you are doing a good job"[6] and denied that "disagreement over the goals of the school" was present. We intend to pursue this further, because our hunch is that such protestations of agreement reflect defensive solutions to the actual problems of goal ambiguity and goal disagreement, which do in fact exist.

I believe that this ambiguity and pseudo-consensus around school output measurement encourages the institutionalization and ossification of teaching procedures. If it cannot really be determined whether one course of action leads to more output than another, then why stop lecturing? There is a further consequence (stemming particularly from the unacknowledged but powerful custodial function of the school): highly rigid time and personnel allocations in most American schools. Hall passes, the forty-seven-minute period, and the difficulty some teachers have in finding time to go to the toilet are all examples. It is interesting that the increasing use of computers for class scheduling has not, to my knowledge, exploited the enormous potential of information-processing machines for making a *more* rather than less flexible learning environment. In any event, I wish only to make the point that goal ambiguity and procedural rigidity may very well turn out to be closely connected.

2. *Input variability*. Another, possibly unique, property of educational organizations is a very wide variation in input from the environ-

[5] If you doubt for a minute that custodial care is an important goal of the American public school, try this "Gedanken-experiment." Which would be the most effective form of teacher strike: (a) for teachers to stay home; (b) for teachers to come to school, but teach the children nothing?

[6] This is a remarkable assertion, in light of the encyclopedic (and to me gloomily inconclusive) research findings on teacher effectiveness (see Gage, 1963b).

ment, particularly in relation to children and personnel. Since the school is defined in America as publicly responsible, it must accept children of a very wide range of ability and motivation to carry out its activities (this holds true, of course, for custodial and socialization goals as well as academic learning goals). The current stress on programs for the "culturally deprived" only serves to divert attention from the fact that the American schools seem never to have been able to cope effectively with children from lower socioeconomic levels.[7]

This is no place to review in any detail the problem of variability in teacher performance, but here again it is important to note that the range of intellectual ability, interpersonal skill and knowledge of subject matter among teachers is probably at least as great as that among pupils. This variability causes considerable stress in educational organizations, and develops the need to provide teaching personnel with methods and procedures which are (in effect) teacher-proof. Wayland (1964) has reviewed this problem as a function of the enormous historical expansion of the scope of American education; he suggests that the teacher's role is now essentially that of a bureaucratic functionary, all protestations of "professionalism" to the contrary.

3. *Role performance invisibility*. Classrooms are in effect the production departments of the educational enterprise; in them teachers teach. Yet, this role performance is relatively invisible to status equals or superiors. Children can observe, usually very acutely, the quality of a teacher's execution of her role, but they are not allowed to comment on this, and have few (if any) sanctions to bring to bear. Thus, rewards in the teaching profession seem relatively detached from others' estimates of one's performance; the average teacher, as Lortie (1961) has pointed out, gains most satisfaction from intrinsic properties of the role behavior involved. Teaching thus becomes a craft-like occupation, rather than a profession, and substitute criteria for teaching effectiveness, such as "how interested the kids are" begin to appear and are used vigorously. Perhaps this is what our teachers meant when they said it was not difficult to know when they were doing a good job.

4. *Low interdependence*. A further characteristic of educational organizations, when compared with thing-producing systems, seems to be a relatively low interdependence of parts. Teacher A's failure to teach anything to her minions affects the job-relevant behavior of teacher B very little—except in a rather diffuse, blaming sense, as when junior high-school teachers devoutly declare their belief that basic skills are not present in newly-arrived seventh graders.

This low interdependence has several consequences. First, it tends to reinforce the pyramidal "man-to-man" style of supervision which

[7] See, for example, the really staggering data on reading retardation and advancement as a function of social class in Barton and Wilder (1964).

Likert (1961) and others have shown to be inimical to organization effectiveness. In the case of teachers of young children, it tends to promote a kind of infantilism and boredom; in many teachers, as suggested by a recent study (Peterson, 1964) the peak of productive contribution tends to be in the twenties, with distancing from students and potential routinization starting in the mid-thirties. The reported stresses and strains in most accounts of team teaching—an attempt to increase interdependence in educational organizations—are mute testimony to the strength with which "separatist" norms have become institutionalized in the American public school.[8]

High interdependence is not without its difficulties, of course. As Golembiewski (1964) has pointed out, the classical division of industrial organizations into specialized departments tends to promote hostility, competitiveness, and disjunction between the authority system and other aspects of the organiaztion such as communication patterns, friendship relationships, and work flow. He suggests an alternative organization model involving the existence of "product divisions," each of which contains in it all the specialties necessary to undertake an operation such as buying materials for, producing and marketing a washing machine. Schools are organized in a product division manner, in effect. But Golembiewski's analysis—this is crucial—depends on the existence of simple, rapidly-available output measures, so that the performance of a product division can be monitored. As we have seen, the absence of such measures—and more fundamentally, the belief that they can never be produced—is a serious barrier to the effectiveness of educational organizations.

5. *Vulnerability*. The American public school, even more than other public organizations, is subject to control, criticism, and a wide variety of "legitimate" demands from the surrounding environment: everyone is a stockholder. Any public organization tends to generate this type of relationship with systems and persons outside its boundary. But a people-processing organization such as the school is dealing with extremely valuable property—children—who return to their parents each night with more or less accurate news of how they have been treated. Thus, in the special kind of organization termed a school, almost any role occupant—board member, superintendent, principal, staff specialist, or teacher can be criticized by parents or citizens at large. To the system inhabitants, the organization skin seems extremely thin. Many kinds of ingenious defenses are adopted to solve this

[8] Lortie's (1961) comments on a three-part norm system are relevant here: He comments on the teacher as subscribing to the following beliefs: a) the teacher should be free of interference in his teaching; b) other teachers should be considered and treated as equals (in spite of the fact that they obviously differ in interests and skill); c) teachers should act in a friendly manner toward one another in informal contacts. Note that these norms reinforce each other in such a way as to inhibit effective, interdependent work.

problem—policies about visiting the classroom, brain-washing of new board members by the superintendent and the old members (cf. Sieber, in press), buffer devices such as the PTA, and so on. Yet, the fact remains that a consumer who doesn't like the octane rating of his gasoline cannot go to the refinery and criticize the operation of a cat-cracker—but a parent who feels conflicted about her child's reading ability can be pretty violent with the first grade teacher. (I might comment that this vulnerability seems most sharp when viewed from the inside. Many parents apparently feel that the school is impregnable, and that they must not raise complaints, rock the boat, etc.)

In any event, this state of affairs represents, I believe, a serious failure of adaptation skills of schools as organizations, and tends to reduce school system autonomy sharply. In recent years, I have met only one school superintendent who told me he was going ahead actively (and successfully) with curriculum and organization changes to which a majority of his community were opposed. As it turned out, he was an old private school man.

6. *Lay-professional control problems.* Public schools are governed by laymen, most of whom have not been inside a school for twenty years prior to their succession to the board. As a result, they often agree tacitly or explicitly on a division of labor with the superintendent and his staff (the policy—procedure distinction developed by Brickell and Davies is one such example). But even where the board is "well trained" and leaves the execution of policy to the superintendent, notice that the question of *educational policy* determination still remains a moot one.

And there are internal lay-professional problems as well. In many respects, the principal of an elementary or high school, in terms of expert knowledge, may find himself far behind the capabilities of particular teachers on his staff—and is in this sense a layman as well. The problems of organizations with high proportions of professionals have been studied vigorously (ex: hospitals, and research organizations); I only wish to indicate here that the fruits of such study so far have found little application in schools.[9]

7. *Low technological investment.* Lastly, it seems very clear that the amount of technology per worker in schools is relatively low. From 60% to 75% of a local school system's budget ordinarily goes to salary, with a fraction for equipment and materials. Even if we count buildings as "technological investment," the picture is rather different from that in most industries. This has consequences: social transac-

[9] It is interesting to note that the greatest inroads of applied behavioral science seem to have been in research-based organizations, in areas such as aerospace, electronics, and petroleum refining. Why this has not happened in schools (and universities!) is an interesting question. It may very well be that a knowledge-*spreading* organization (such as a school) operates rather differently from a knowledge-*making* one (such as a research group).

tions, rather than socio-technical transactions, come to be the major mode of organization production. Because of this, it is possible that education, as James Finn has suggested, has never made it out of the folk culture stage. And we are back once again to goal ambiguity and its problems.

These, then, strike me as special strains, ways in educational organizations as such and the public school in particular depart from the generalized model of organization health outlined earlier. In sum, I would suggest that, in terms of the dimensions above, the major difficulties to be expected in most public schools would center around goal focus, (as a consequence of goal ambiguity), difficulties in communication adequacy and power equalization stemming from low interdependence; and perhaps most centrally, failures in innovativeness, autonomy, adaptation, and problem-solving adequacy, because of vulnerability and lay-professional conflict.

Interestingly enough, I do not see any clear reason for believing that internal "maintenance problems" (such as those involved in effective resource utilization, cohesiveness, and morale) are sharp points of strain in most school systems; it may very well be that low interdependence, plus orientation to a professional reference group, carry with them a willingness to "settle for less' than the optimum in these areas.

The Induction of Organization Health

The particular degree of health of any local school system, given a multiple-criterion approach such as that suggested here, undoubtedly varies from time to time. A question of considerable interest is: what can be done to induce a greater degree of organization health in any particular system? By now a fair amount of experience exists, drawn from the interesting blend of consultation and research in which an increasing number of behavioral scientists now find themselves involved, primarily with industrial organizations. These methods can perhaps most usefully be considered as *interventions* in the on-going life of a system; this term implies an action which interferes with or reorients processes—either pathological or normal—ordinarily occurring in the system. A teacher's intervention in a child's problem-solving serves to reorient his thinking; perhaps more importantly, it can aid the child to mobilize his own energies more effectively. Thus the usual aim of an intervention is to start internal change processes going in the system at hand, rather than only causing an immediate change.

Below are described six interventions aimed at improving organization health.[10] In some cases, plausible statements can be made about

[10] See Bennis (1963, 1964) for a thorough review of alternative approaches being used.

which dimensions of health are most typically influenced by a particular intervention. For the most part, however, we do not really know; it is exactly the function of our research project to discover how these are likely to work in educational organizations. In conclusion, some common principles underlying the six interventions are discussed.

1. *Team training.* In this approach, the members of an intact work group (for example, the superintendent and his central office personnel) meet for a period of several days away from their offices, with consultant help. They examine their own effectiveness as a problem solving team, the role of each member in the group and how it affects the group and the person himself, and the operations of the group in relation to its organizational environment. This problem-solving may be based on fairly careful prior data collection from individuals as to their views on the current problems of the system; these data are summarized and form the beginning of the group's agenda. Occasionally, exercises and theoretical material on group and organization functioning may be supplied by the outside consultant.

Under these circumstances, the members of the group usually improve in their abilities to express feelings directly, and to listen to—and understand—each other. Communication adequacy is thus considerably increased. The members also deal with internal conflicts in the team, and learn to solve problems more effectively as a unit, thus presumably increasing their ability to meet the demands placed upon them by other parts of the system. Over a period of time, beginning with the top decision-making group of the system, this intervention may be repeated with other groups as well. Industrial programs of this sort have been described by Argyris (1962) and Blake and Mouton (1962).

2. *Survey feedback.* In this approach, data bearing on attitudes, opinions, and beliefs of members of a system are collected via questionnaire. An external researcher summarizes the data for the organization as a whole, and for each of a number of relevant work groups. Each work group, under the guidance of its own superior, and perhaps with consultant help, examines its own summarized data, in comparison with those for the organization as a whole. The group makes plans for change stemming from these discussions and carries them out. The focus of this intervention is on many or all of the work groups within a total setting. The aim is to free up communication, leading to goal clarification and problem-solving work. The relative objectification involved in looking at data helps to reduce feelings of being misunderstood and isolated, and makes problems more susceptible to solution, rather than retaining them as a focus for blaming, scapegoating, griping and so on. For an account of survey feedback procedure, see Mann (1961); Gage (1963a) has tried a similar ap-

proach effectively with student-to-teacher feedback, and is now studying teacher-to-principal feedback.

3. *Role workshop.* Sometimes called the "horizontal slice" meeting, this intervention involves all the people in a particular role (for example, elementary principal). They fill out research instruments dealing with role expectations which various others hold for them, the fit between their own wishes and these expectations, their actual role performance, etc. These data are summarized, and form the vehicle for a series of activities (discussion, role practice, decision-making exercises, problem-solving and so on) at a workshop attended by all the people in the role. The main focus here is on role clarity, effectiveness, and improved fit between the person and the role. By sharing common role problems, people occupying the role may develop alternative solutions which result in better performance of that role and more "self-actualized" operation in general.

4. *"Target setting" and supporting activities.* In this approach, periodic meetings are held between a superior and each of his subordinates, separately. In a school system, this might involve the superintendent and his staff members, or a principal and his teachers. The work of each subordinate is reviewed in relation to organizational and personal goals, and the superior and subordinate agree collaboratively on new targets for the subordinate's work and personal development. These "targets" are in turn reviewed after some work time (usually six months or so) has elapsed. During that period, other activities such as role meetings, consultation, self-operated data collection, academic courses, and workshops, may be engaged in by the subordinate to develop needed skills and understandings as he works toward the collaboratively-set goals. The focus of attention here is the working relationship between superior and subordinate, and the degree to which they are together able to help the subordinate grow and develop on the job. Improved trust, feelings of support, better and more satisfying role performance, and more open communication usually result. Zander (1963) has reviewed thoroughly the problems and values of performance appraisal, including commentary on the target-setting approach.

5. *Organizational diagnosis and problem-solving.* This intervention involves a residential meeting of members of an intact work group, usually at the top of the organization (or in small organizations, up to size 40-50, the entire work force). They meet for several days to identify problems facing the system, and the reasons for the existence of these; to invent possible solutions; to decide on needed system changes; and to plan implementation of these through regular channels and newly-constructed ones. It differs from team training as described above in that relatively less attention is given to team relation-

ships and interpersonal effectiveness as such, and more to system problems in the large. The main focus of attention is on the organization and its current functioning. The improvement of problem-solving activity and communication adequacy are typical results. For an account of two such meetings conducted with an industrial organization, see Zand, Miles, and Lytle (forthcoming).

6. *Organizational experiment.* In this approach, a major organizational variable of interest is changed *directly*,[11] by agreement of the responsible administrators, and needed implementation efforts. One such approach is described vividly by Morse and Reimer (1956): in several divisions of a large organization, the level of decision-making was moved radically downward, thus giving more autonomy to subordinates; in several other divisions the level of decision-making was moved up; and in several divisions no change was made. Such an approach requires the careful collection of pre-post data, and the use of control groups in order to test the consequences of the change. The halo of "experiment" is an aid to acceptance, since the arrangement is seen as not only temporary, but scientific, and responsibly managed. Such an approach ordinarily includes a feedback stage, in which the results are examined carefully and implications for the continuing functioning of the organization drawn.

These, then, are six possible approaches to the induction of organization health. Certain common threads appear to flow through all of them.

1. *Self-study.* These approaches reject the "technocratic" change model involving the recommendations of a detached expert, and actively involve the system itself in what might be called organizational introspection. The same holds true for approaches involving group self-study for various teams in the organization, and personal introspection and re-examination by role occupants.

In common with the action research movement in education, these approaches also carry the assumption that an operant stance on the part of the organization is both theoretically and practically preferable to the problems involved in dependence on outsiders for system change.

2. *Relational emphasis.* These approaches do not conceive of the organization as a collection of jobs with isolated persons in them, but as a network of groups and role relationships; it is the functioning of these groups and relationships, as such, which requires examination and self-operated, experimental alteration. The aim is not to ferret

[11] I am reminded of Hollis Caswell's classic remark when asked in 1943 how the newly-formed Horace Mann-Lincoln Institute would proceed in its program of school experimentation: "We'll change the curriculum by changing it."

out and change the "attitude" of old-fogey Principal A, but to focus on the relationships and group settings in which Principal A's attitudes are evoked.

3. *Increased data flow.* These approaches all involve the heightening or intensification of communication, especially vertically, but also diagonally and horizontally. New feedback loops are often built in to the existing system. The use of status-equalizing devices such as intensive residential meetings also encourages fuller and freer flow of information through channels which may have been blocked or have always carried distorted messages.

4. *Norms as a change target.* By focusing on groups and relationships, and increasing data flow, these approaches have the effect of altering existing norms which regulate interpersonal transactions in the organization. If, for example, a work group where the norms are "play it close to the vest, and don't disagree with the boss" engages in a team training session, it is quite likely—since all group members have participated in the experience—that norms such as "be open about your feelings whether or not they tally with the boss' wishes" will develop. These approaches thus have a strong culture-changing component, based on intensive, data-based interaction with others.[12]

5. *Temporary-system approach.* But norm-changing is by definition very difficult under the usual pressures of day-to-day operation in the organization. "Business as usual" has to prevail. Most of the interventions described involve the use of residential meetings, which constitute a detached, "cultural island" approach to organizational introspection and self-correction. They are in effect temporary systems,[13] where new norms can develop, and where, given the suspension of the usual pressures, meaningful changes can be made in the structure and functioning of the permanent system.

6. *Expert facilitation.* All of these interventions also include the presence of a semi-detached consultant figure, whose main functions are to facilitate, provoke, and support the efforts of the system to understand itself, free up communication and engage in more adequate problem-solving behavior. The outsider role, however, is seen as impermanent; it is only associated with the system during the actual period of the intervention itself. If the intervention is successful, the

[12] In retrospect, the crucial role of norms in the maintenance of organizational health has probably been underplayed in this paper. In our research, we are planning to collect data on norms such as those regulating interpersonal authenticity and awareness, trust, objectivity, collaboration, altruistic concern, consensual decision-making, innovativeness, and creativity. Most of these are directly co-ordinated to the dimensions of organizational health reviewed above.

[13] See Miles (1964) for an analysis of the special properties of temporary systems for change-inducing purposes.

organization itself continues the self-corrective processes which have been begun by the intervention.

Whether or not these interventions, drawn from work with thing-producing organizations, can be used plausibly with people-processing organizations such as schools is an interesting question, to which my colleagues and I are beginning to gather some answers. Our impulse at the moment is to believe that the answer will be affirmative. With the assistance of two or three school systems, we expect to have some empirical data on intervention results in about two years, an eventuality to which we look forward with a good deal of pleasure.

In Conclusion

It might be useful to point out in conclusion that the position taken in this paper is *not* that an organization must necessarily be brought to a state of perfect health before it can engage in any meaningful short-run innovative projects at all. Rather, we feel it is quite likely that the very act of carrying out small scale projects in planned change can undoubtedly strengthen the health of an educational organization—but only if *direct attention is paid concurrently to the state of the organization*. The basic innovative project, we believe, must be one of organization development itself.

This paper comes out of preliminary work in the Project on Organization Development in Schools, at the Horace-Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University. My colleagues on the project, Paula Holzman, Harvey Hornstein, and Dale Lake stimulated many of the ideas recorded here, and gave critical reading to the manuscript.

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